

CLAIMS

1. An audio/video synchronization processing apparatus for synchronizing video data and audio data having different predetermined frame lengths, comprising:
- 5 a timer means;
- a storage means for storing a start time of each frame of the video data and audio data, a time of a pause request; and a time of a pause release request counted by the timer means; and
- 10 a controlling means for determining which of the video data and the audio data to delay in frame units after the pause release request or not to delay either based on the start time of each frame of the video data and audio data, the time of the pause request, and the
- 15 time of the pause release request.
2. An audio/video synchronization processing apparatus as set forth in claim 1, wherein the controlling means
- calculates an audio delay time constituted by a delay time of the frames of the audio data based on
- 20 breaks of frames of the video data at the time of a pause request,
- monitors a frame offset time constituted by a difference of the frame start time of the audio data with respect to the video data at each start time of each
- 25 frame of the video data after a pause request,
- calculates an audio correction time based on the

audio delay time and the frame offset time at the time of a pause release request for a pause request, and

determines which of the video data and the audio data to delay in frame units or not to delay either after
5 a pause release request based on a cumulative audio correction time obtained by cumulatively adding the audio correction time calculated for each pause release request.

3. An audio/video synchronization processing apparatus as set forth in claim 2, wherein said control means
10 delays said video data by one frame with respect to said audio data after a pause release request when judging that said audio data is advanced with respect to the video data based on said cumulative audio correction time.

4. An audio/video synchronization processing apparatus
15 as set forth in claim 2, wherein said control means delays said audio data by one frame with respect to said video data after a pause release request when judging that said audio data is delayed by one frame or more with respect to the video data based on said cumulative audio
20 correction time.

5. An audio/video synchronization processing method for synchronizing video data and audio data having different predetermined frame lengths, comprising:

a step of calculating an audio delay time
25 constituted by a delay time of the frames of the audio data based on breaks of frames of the video data at the

time of a pause request,

a step of monitoring a frame offset time constituted by a difference of the frame start time of the audio data with respect to the video data at each
5 start time of each frame of the video data after a pause request,

a step of calculating an audio correction time based on the audio delay time and the frame offset time at the time of a pause release request for a pause
10 request, and

a step of determining which of the video data and the audio data to delay in frame units or not to delay either after a pause release request based on a cumulative audio correction time obtained by cumulatively
15 adding the audio correction time calculated for each pause release request.

6. An audio/video synchronization processing method as set forth in claim 5, further comprising delaying said video data by one frame with respect to said audio data
20 after a pause release request when judging that said audio data is advanced with respect to the video data based on said cumulative audio correction time.

7. An audio/video synchronization processing apparatus as set forth in claim 5, further comprising delaying said
25 audio data by one frame with respect to said video data after a pause release request when judging that said

audio data is delayed by one frame or more with respect to the video data based on said cumulative audio correction time.

8. An audio/video recording apparatus for
5 synchronizing video data and audio data having different predetermined frame lengths, comprising:

a timer means;

a storage means for storing a start time of each
frame of the video data and audio data, a time of a pause
10 request; and a time of a pause release request counted by the timer means;

a synchronization controlling means for
synchronizing the audio data after a pause release
request in frame units based on the start time of each
15 frame of the video data and audio data, the time of the pause request, and the time of the pause release request;
and

a multiplex data generating means for adding time
information to the video data and the audio data
20 synchronized by the synchronization controlling means and generating multiplex data.